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The AGRICULTURAL SITUATION

Bureau of Agricultural Economics

• U. S. Department of Agriculture

Volume 31

AUGUST 1947

Number 8

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The Future of Our Oil Crops

THE total cash farm value of the Nation's oil crops was almost 1 billion dollars in 1946, as shown in a recent study by the Bureau of Agricultural Economics.

Nearly half of total value was accounted for by soybeans. Cottonseed, peanuts and flaxseed, in the order named, made up most of the rest. The high value of the oil crops, equal to about 9 percent of farmers' cash receipts from crops, was attained only in recent years. Increased production, smaller imports, and large demand contributed to this high value.

Growers of oil crops are now greatly interested in the future prospects of these crops. They are especially anxious about soybeans, peanuts and flaxseed, production of which went up greatly during the war. They are wanting to size up the peacetime demand for their oil crops—not only for this year and next, but also for the more distant period when the world's supplies of fats and oils approach normal.

One way to do this job is to look at what we could expect under generally prosperous conditions, say about 1955.

Under such conditions there would be market outlets for large supplies of fats and oils, and our production would stay high. Apart from the world situation, the most important factors at home will be the level of our own oil consumption, compared with the total supply in this country.

Consumption of fats and oils in 1941 was the largest of any prewar year. Employment and incomes were pretty high. Consumption (disappearance) of oils in 1941 averaged about 80 pounds per capita. Of this total, about 50 pounds were used for food and 30 pounds for industrial purposes.

Similar rates of use in 1955, with an estimated population of 150 million, would mean a total consumption of 12 billion pounds in this country. (See table.) Food uses would account for 7.5 billion pounds of this total and industrial uses for 4.5 billion pounds. Although 1941 was a year of relatively high consumption, it is worth noting that the per capita food use (including butter) has been about 50 pounds per capita in a number of other years. However, it is not likely to go much beyond this point. Industrial uses

probably would amount to as much or more than the 1941 level of 30 pounds per capita if as large a share of our people are at work in 1955 as in 1941. Industrial uses per capita would be greater than in 1941, under these conditions, if the construction and building industries are large consumers of oils.

The supply of fats and oils would come mainly from animal fats and vegetable oils. The bulk would be of domestic origin, although some would be imported, particularly those oils needed for industrial use. Total production of animal fats and marine oils probably would be well above the 6,900 million pounds average for 1940-44. A likely figure might be about 7,800 million pounds. This total would be only slightly above 1944. Production of vegetable oils might be about 3,200 million pounds. Our output of cottonseed oil would probably go up. However, there would be less peanut, corn, and soybean oil than in recent years.

Much vegetable oil probably would be imported in 1955, under conditions of prosperity. Most of the oils imported before the war were for industrial purposes and only small quantities went into food. As our output of food fats and oils is now quite large, less of these are likely to be imported than in the past. Most of the oils we import go into the soap and the drying industries. The soap oils we import, include coconut, palm, babassu, and palm kernel, and the drying oils are tung, perilla, oiticica, and linseed. Some of these are imported because of their superior qualities for certain purposes, as in the case of palm oil used in tin plating. If the United States continues its leadership toward freer world trade, imports of fats and oils in 1955 might be 1,600 or 1,700 million pounds. These

imports would be offset to some extent by exports of 600 to 700 million pounds of lard and perhaps some soybeans. Thus, we would have a net import of about 1 billion pounds, compared with nearly twice that average in 1935-39.

The world's postwar recovery in output of fats and oils has been much slower than expected. Also, world population is growing and a rise in the level of living is expected soon in many countries. These factors are likely to bring a greater than average increase in the rate of consumption in the next decade. We cannot know what will be Europe's exact demand for fats and oils in the next few years. Still, no big world surpluses seem likely by 1955, barring widespread depressions.

Under conditions of general prosperity, then, neither the world situation in 1955 nor the domestic outlook for fats and oils would call for any drastic return to prewar production levels for our oil crops. Of course, some adjustments might be expected for individual oil crops. These are indicated below on the basis of what would be required in 1955 under prosperous conditions.

Soybeans, now our largest oil crop, and concentrated largely in the Corn Belt States, would hold most of its war-gained expansion in 1955. The increase in production of soybeans, together with other factors, has helped soybean oil and meal to gain wider acceptance. Crushing of soybeans increased from an annual average of 35 million bushels in 1935-39 to over 150 million bushels in recent years. Recent technological advances may make soybean oil more adaptable for use in the drying industries, suggesting a possible expansion in its use for drying. Also, we may be able to export large quantities of soybean oil to northern Europe. This will depend on a number

The Agricultural Situation is issued monthly by the Bureau of Agricultural Economics, United States Department of Agriculture. It is published by direction of the Secretary of Agriculture as administrative information required for proper transaction of the public business and approved by the Director of the Budget.

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Single copy 5 cents, subscription price, 50 cents a year, foreign 70 cents, payable in cash or money order to the Superintendent of Documents, Government Printing Office, Washington 25, D. C.

The AGRICULTURAL SITUATION is sent free to crop and price reporters in connection with their reporting work

of factors, including the status of the crop in Manchuria. Even though the outlook is promising, our own soybean production will probably shrink moderately. This would be needed to protect our soil from erosion and depletion. Adjustment of our soybean acreage to conservation requirements would cut our crop down to 160 or 170 million bushels. In recent years our crop has been over 190 million bushels a year.

The cotton crop is a key source of vegetable oils. In 1935 through 1939 cottonseed provided about 20 percent of our total production of fats and oils from domestic materials. Cottonseed oil is in a stronger competitive position than many other vegetable oils, as cottonseed is a byproduct of the cotton. Cotton production has moved downward in recent years, but is expected to recover moderately. By around 1955 it might be placed at about 13 million bales. This would mean a supply of cotton and cottonseed oil approximately equal to the 1935-39 average.

The greater part of the peanut crop is used for direct consumption. Some of the largest uses are as peanut butter, peanut candy, and roasted peanuts. Occasional general surpluses are diverted and crushed for oil under government programs, but normally only peanuts of low quality are crushed. Total production of peanut oil averaged

about 60 million pounds annually before the war, but it may stay well above this if the peanut crops continue large.

Peanut production about 1955 under conditions of average technology might be about 1,800 million pounds, compared with over 2,000 million pounds in recent years. After allowing for 9 pounds of peanuts per capita for direct consumption and necessary supplies for seed, it seems that enough peanuts could be left for crushing to produce at least 75 million pounds of oil.

Production of flaxseed rose greatly in the war years but its volume is more variable than that of the other oil crops. In this country we use flaxseed for industrial purposes rather than for food. A large part of what we use is imported. Just before the war, production averaged only a little over 10 million bushels annually, with imports close to 20 million bushels. Our highest output was in 1943 when we harvested some 52 million bushels. Major flaxseed States are Minnesota and North Dakota, with South Dakota and California next. Imports during the war were low because of shipping shortages and the necessity for substituting linseed oil for fuel in Argentina.

Demand for flaxseed in the next decade will be high if building construction is active. Our production of flaxseed may stay well above prewar, but well below our own needs. The future level

Production of fats and oils from domestic materials, imports or exports, and consumption in the United States about 1955¹

Fats and oils	Production from domestic materials	Consumption	Imports or exports ²
Animal and marine:			
Bitter ³	2,400	2,400	—600
Lard.....	3,000	2,400	
Tallow, grease and other.....	2,100	2,100	
Marine oils.....	300	300	
Vegetable:			
Cottonseed.....	1,400	1,400	
Soybean.....	1,150	1,050	+100
Corn oil.....	200	200	
Peanut.....	75	75	
Linseed.....	425	900	+475
Other vegetable.....	20	20	
Other imported fats and oils.....		1,155	+1,155
Total.....	11,070	12,000	+930

¹ Estimate with assumed conditions not a forecast.

² Minus (—) sign denotes exports: plus (+) sign denotes imports.

³ Actual weight.

Feed Supplies

Forest Fires

IN THE first half of this year there were 4,474 forest fires on National Forests or on adjacent protected land. Almost 95,000 acres were burned over. Cost of putting them out was probably around \$2,000,000. All were man-caused except 519 that were set by lightning.

Fires on the 229,000,000 acres under protection in these forests were about 100 fewer than in the first half of last year, but were above average.

More than half of this year's fires in national forests were in 11 southern States in Forest Service Region 8. The fires burned over 63,525 acres.

Michigan, Wisconsin and Minnesota, or Forest Service Region 9, had the next largest number, or 768. All but ten of the Lake States fires were man-caused. They burned over 11,775 acres.

of European demand and the competition which may arise from other oils are question marks. Better fractionation may provide more drying oil from soybeans. This may also help make linseed oil more competitive with tung oil and perilla oil.

Consumption of linseed oil in 1955 may reach 900 million pounds. Probably a little less than half of this would come from domestic flaxseed. Our crop might be about 27 million bushels. The rest of what we need would be imported. Of course, we could grow more flaxseed than thus far. However, the risky nature of this crop in many areas might make that unprofitable.

Our oil crop output may call for some cut from the present levels. But the outlook is for both production and consumption of fats and oils to remain relatively high in the next decade, if business conditions are generally prosperous.

PETER L. HANSEN

Bureau of Agricultural Economics

Smaller feed grain production this year will not cause a decrease in meat production in 1947. But lower meat output next year is indicated.

FEED concentrate supplies for the 1947-48 season, probably will be larger than prewar, but below the large supplies of the last 6 years. This year's output of feed grains is indicated at 107 million tons, 15 percent down from last year's record, but 8 percent under the 1937-41 average.

As at least partial offset to the decrease in corn, the corn carry-over will be larger than last year, more wheat will be fed from the record wheat crop this year than in 1946, and supplies of oilseed meal will be larger. A record supply of hay per animal unit is probable, and pastures and ranges are in generally good shape.

On the other hand, we may have large quantities of soft and wet corn this year. This means less feeding value per bushel and heavier than usual feeding of corn this fall and winter.

Livestock numbers probably will ease off, in line with the trend of the last 3 years. On a per animal unit basis, the supply of feed concentrates, including wheat fed, is likely to be a little larger than in most recent years, except in the current season.

A smaller corn crop in the Corn Belt will cut down sharply the quantity of corn sold by farmers in 1947-48 compared with the present season. Much less corn is expected to be exported than this year. But even so, less corn than this season will be left for livestock men in feed deficit areas and for corn processors.

Expectation that the 1947 feed grain crops would be below 1946, together with continued strong demand, kept feed prices up during June and July. Prices received by farmers in mid-July were the highest on record. Prices of oats and barley have shown little weakness, although they usually decline at this season. Byproduct feed prices generally were higher than in May, but well below the high levels of last summer and fall. With good weather during the rest of the growing season, feed grain prices probably will go down seasonally in the last half of 1947. The seasonal decline in corn prices this fall is expected to be much less pronounced than in the fall of 1946. Feed prices will average somewhat higher next winter than last.

Vegetables for Canning

THIS is the season when vegetable canning, both in farm kitchens and in the big canneries, is at the peak. For many truck farmers, it is a time of fat harvests and, when conditions are right, plentiful cash.

Growing truck crops for commercial processing is a big job on many farms. Last year our farmers grew and sold more than 200 million dollars worth of truck crops for commercial processing, mostly for canning. Consumption of canned vegetables has been at the rate of 40 to 45 pounds per capita in recent years (canned weight basis). About a fourth or fifth of all the vegetables (excluding potatoes and sweet-potatoes) grown and consumed in the United States are canned commercially.

The major vegetables canned, in order of value, are tomatoes, green peas, snap beans, and sweet corn. There are many others, of course.

Commercial canning of vegetables is important in many States, but the great bulk of it is done in two major areas. One broad area extends from Minnesota and Iowa eastward to the New England States. This area accounts for over half the total value of truck crops that are commercially processed. The other principal area is made up of the three Pacific Coast States which together turn out about 30 percent of the total value of such crops.

The five leading States in terms of value of truck crops produced for commercial processing are California, Wisconsin, Indiana, New York, New Jersey and Maryland. In four of these, tomatoes are the chief processing crop. In Wisconsin, green peas are the leading processing crop and snap beans are next.

In 1946, farmers got record high prices for their major truck crops for processing, except for beets, cabbage for sauerkraut, and spinach.

Differences in prices to farmers from one year to another reflect largely the fact that packers are making stronger or weaker attempts to get tonnage produced. If a higher price is offered, more farmers are willing to sign up for acreage. Or a processor may get additional tonnage by offering to buy at competitive prices some of the crop

FARM VALUE OF TRUCK CROPS, COMMERCIAL, FOR PROCESSING¹, BY STATES

State and division	1946 ²
Maine	1,367
New Hampshire	44
Vermont	73
Massachusetts	136
Connecticut	33
New York	18,426
New Jersey	14,936
Pennsylvania	8,452
North Atlantic	44,467
Ohio	8,683
Indiana	21,988
Illinois	9,557
Michigan	7,944
Wisconsin	22,153
Minnesota	7,623
Iowa	3,240
Missouri	1,695
South Dakota	37
Nebraska	199
Kansas	112
North Central	83,231
Delaware	3,698
Maryland	11,715
Virginia	4,111
West Virginia	80
North Carolina	632
South Carolina	785
Georgia	1,961
Florida	2,353
South Atlantic	25,341
Kentucky	390
Tennessee	1,570
Alabama	32
Mississippi	454
Arkansas	3,617
Louisiana	433
Oklahoma	1,205
Texas	8,741
South Central	11,447
Montana	200
Idaho	1,200
Wyoming	125
Colorado	1,837
New Mexico	136
Arizona	31
Utah	3,386
Washington	11,664
Oregon	9,423
California	55,450
Western	83,452
United States	217,938

¹ Asparagus, lima beans, snap beans, beets, cabbage (sauerkraut), sweet corn, cucumbers (pickles), green peas, pimientos, spinach, tomatoes.

² Preliminary.

that was produced for the fresh market. Prices paid to farmers for their processing vegetables may be higher this year than last for a few crops, although much lower for some others. Packers are influenced not only by their estimates of future demand, but also by the amount of unsold canned stock carried over from the previous year's pack. The carry-over of nearly all canned vegetables at the beginning of the present canning season was larger than a year earlier. However, the stocks a year ago were unusually low. The present carry-over is not seriously larger than the 1943-45 average, except for a few items such as lower-grade green peas, sauerkraut, and tomato juice. Stocks are below average for such items as top-quality beets, green peas, canned whole tomatoes, spinach and other leafy greens.

Reports to date indicate that this year's production or acreage for processing is moderately to much larger

than last year for green lima beans, and pimentos, but slightly to moderately smaller than last year for snap beans, sweet corn and tomatoes. Production or acreage is considerably smaller for beets, cabbage for sauerkraut, and green peas.

Consumer demand probably will stay strong throughout the normal sales period for this year's canned vegetable pack. With certain price adjustments on some of the heavy carry-over items, packers and wholesale distributors should be able to quickly "clear the decks" for movement of another large pack this year.

HERBERT W. MUMFORD

Bureau of Agricultural Economics

SOAP-FAT supplies rose sharply in the first quarter of the year. Production and net imports of the leading soap fats in 1947 may total 2,450 to 2,550 million pounds.

Prices of Farm Products

Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. Average of reports covering the United States weighted according to relative importance of district and State

Commodity	5-year average		July 15 1946	June 15 1947	July 15 1947	Parity price July 15, 1947
	August 1909-July 1914	January 1935- December 1939				
Wheat (bushel)	dollars	0.884	0.837	1.87	2.18	2.14
Rye (bushel)	do	.720	.554	1.76	2.40	2.36
Rice (bushel)	do	.813	.742	1.83	2.22	2.62
Corn (bushel)	do	.642	.691	1.96	1.85	2.01
Oats (bushel)	do	.399	.340	.847	.915	.922
Barley (bushel)	do	.619	.533	1.40	1.50	1.57
Sorghum, grain (100-pound)	do	1.21	1.17	3.04	2.80	2.80
Hay (tons)	do	11.87	8.87	15.00	16.00	15.10
Cotton (pound)	cents	12.4	10.34	30.83	34.07	35.88
Cottonseed (ton)	dollars	22.55	27.52	60.00	79.60	50.20
Soybeans (bushel)	do	.96	.954	2.31	3.07	3.09
Peanuts (pound)	cents	4.8	3.55	8.97	9.99	9.55
Flaxseed (bushel)	dollars	1.69	1.69	13.47	5.92	5.75
Potatoes (bushel)	do	1.697	.717	1.43	1.56	1.69
Sweetpotatoes (bushel)	do	.878	.807	2.75	2.49	2.51
Apples (bushel)	do	.96	.90	3.42	3.23	2.95
Oranges on tree (box)	do	6.29	1.11	3.62	1.08	.89
Hogs (hundredweight)	do	7.27	8.38	117.20	23.30	23.60
Beef cattle (hundredweight)	do	5.42	6.56	15.70	19.50	18.80
Veal calves (hundredweight)	do	6.75	7.80	16.30	20.80	20.80
Lambs (hundredweight)	do	5.88	7.79	15.90	21.10	21.10
Butterfat (pound) ¹	cents	26.3	20.1	70.8	63.0	68.0
Milk, wholesale (100 pounds) ²	dollars	1.60	1.81	14.10	13.64	8.75
Chickens (pound)	cents	11.4	14.9	29.4	27.5	28.1
Eggs (dozen)	do	21.5	21.7	37.1	41.5	45.7
Wool (pound)	do	18.3	23.8	142.7	38.3	39.2

¹ Revised.

² Comparable base price, August 1909-July 1914.

³ Comparable price computed under sec. 3 (b) Price Control Act.

⁴ 1919-28 average of \$1.12 per bu. used in computing parity.

⁵ 1919-28 average for computing parity price.

⁶ Adjusted for seasonality.

Wage Income of Hired Farm Labor

THE average cash wage income of all people who worked at least part of last year as hired workers on farms totaled \$521. This information on wage earnings comes from a national sample representing 2,770,000 of the 3½ million people who did hired farm work last year. Results of this study are reported in the Bureau of Agricultural Economics' "Farm and Non-Farm Wage Income of the Hired Farm Working Force in 1946," released in June.

Of the \$521 average cash wage income of these people, an average of \$130 was from wages for nonfarm work and an average of \$391 was from farm wages. The relatively low figures given here are caused to a large extent by the fact that many people in the hired farm working force are only part-year workers. Farm wage rates, of course, have risen rapidly in the last few years, and many wage workers earned much more than the average.

Some of the 3½ million people who worked for wages on farms worked part of the year in cities and towns, some operated their own farms and did extra hired work for others, and some were housewives and students who did little work for wages during the year. The wage incomes of the different groups varied greatly, depending largely on how much time they worked.

Over a fourth of the people who were surveyed directly and who did some farm work for wages last year said that work was not their major activity during the year. These were mainly students, housewives, and older people. They generally help farmers to meet seasonal labor needs in the summer or fall harvests. Their average wage income of only \$158 pulled down the average of hired farm workers as a whole.

The farm operators who did some wage work on other farms also pulled down the average. In numbers, they made up nearly one-fifth of the hired working force in 1946. However, they averaged only \$294 in wage income, largely because they worked relatively few days. Most of them spent the greater part of the year in operating their own farms.

If these two groups are omitted from the averages, the resulting figures give

a better basis for comparisons with wage earnings from occupations that provide more nearly full-time work. The average cash wage income of hired farm workers who reported that working was their major activity in 1946 (excluding farm operators) was \$781, including \$571 from farm work and \$210 from nonfarm work. This represented earnings from an average of 206 days of wage work in the year, with 21 percent of the time worked and 27 percent of the wages earned at nonfarm work.

The figures cited relate only to cash wages earned, and include no allowance for the value of housing, meals, farm products, or other perquisites which the workers may have received from the farmers who employed them. A previous study of the BAE has shown that for *regular* hired hands the value of perquisites was equal to 31 percent of their cash wages, and that for seasonal workers perquisites were equal to 11 percent of their cash wages.¹

A liberal allowance for perquisites, based on this study, would increase the \$571 cash earnings of regular hired hands from farm work to a total of \$751 in farm wages. Thus the average total wage income in 1946 for farm wage workers who reported working as their major activity in the year would be raised to \$961, by counting in their non-money income from farm work.

In round figures, half of the hired farm working force had on the average a total annual wage income of about \$1,000 per worker in 1946, including wages from nonfarm work. This group includes all of the regular hired hands as well as the seasonal workers who obtained enough nonfarm work to keep them busy most of the year.

Comparable prewar data are not available by which to measure the income gains of hired farm workers in recent years. However, a rough notion can be obtained from the 1940 population census data on the median wage and salary income earned in 1939.

¹ Surveys of Wages and Wage Rates in Agriculture, Report No. 18, Bureau of Agricultural Economics, Dec. 1946, table 28.

Various allowances have to be made for changes in cost of living, and for lack of comparability of the statistics available. When these are made, the results suggest that the improvement in annual wage income of farm laborers since 1939 is much less than the increase of 75 percent shown by the increase of farm wage rates adjusted for changes in living costs.

Over a fourth of all hired farm workers also did some nonfarm wage work during 1946. Nearly three-quarters of a million persons were included in this group. This figure shows the extent to which the farm and nonfarm labor markets overlap. Because the labor needs of farmers are seasonal, most farmers who hire labor do not keep the same number of workers throughout the year. When extra workers are taken on, they must come from groups such as the housewives and students who have not been working, from workers who have been employed on other farms, from the unemployed, or from workers employed at nonfarm jobs.

The people who shifted back and forth from hired farm work to nonfarm work during the year played a big part in helping farmers to meet peak seasonal needs. Farmers paid them somewhat higher cash daily wages, on the average, than they paid their workers

who did only farm wage work during the year. Again with comparisons limited to those who reported working as their major activity in the year, workers reporting both farm and nonfarm wage work averaged \$4 per day while working on farms, compared with the \$3.40 averaged by those reporting only farm wage work in the year. The "overlap group" worked on farms in the seasons of the year and at the types of work for which higher rates are paid to attract the extra workers needed. However, the higher rates may be wholly or partly offset by a lower value of perquisites which these workers get when employed for short periods.

Nonfarm employers paid higher average cash wages to the overlap group than did farmers—\$4.75 as against the \$4 per day. Again, perquisites furnished by farmers may have compensated for some or all of this difference. It appears that farmers were paying workers who shift back and forth from agriculture to industrial unskilled jobs about the same daily wages they earned at nonfarm work. It is also probable that the availability of this labor supply for casual industrial employment in itself affects the level of wage rates for such labor in industry.

LOUIS J. DUOFF

MARGARET JARMAN HAGOOD

Bureau of Agricultural Economics

Average time worked and cash wages earned at farm and nonfarm work in 1946, for farm wage workers classified by their major activity in 1946

Major activity and type of work done in 1946	Percent of farm wage workers in 1946	Average days of wage work in 1946	Average cash wages earned	
			In 1946	Per day worked
Total farm wage workers ¹	100	Number	Dollars	Dollars
Farm wage work		142	521	3.70
Nonfarm wage work		113	391	3.45
Reporting working as major activity ²	54	29	130	4.55
Reporting farm wage work only	33	206	781	3.80
Reporting farm wage work and nonfarm work	21	205	694	3.40
Farm wage work		208	916	4.40
Nonfarm wage work		95	381	4.00
Farm operators who also did farm wage work	19	113	535	4.75
All others ³	27	80	294	3.65
		54	158	2.95

¹ Estimates relate to persons 14 years of age and over in the civilian noninstitutional population in January 1947.

² Excluding farm operators who also did wage work on other farms.

³ Mainly school youths, housewives, and older persons.

Wheat Supply and Price Outlook

DOMESTIC wheat supplies in 1947-48 are now estimated at 1,519 million bushels. The indicated crop is 1,436 million bushels, largest on record. Although the stocks on July 1 were only 83 million bushels, domestic supplies are large. They are the highest on record except for 1942 and 1943.

With these large supplies more wheat can be exported and the carry-over be increased over the low stocks on hand July 1, 1947.

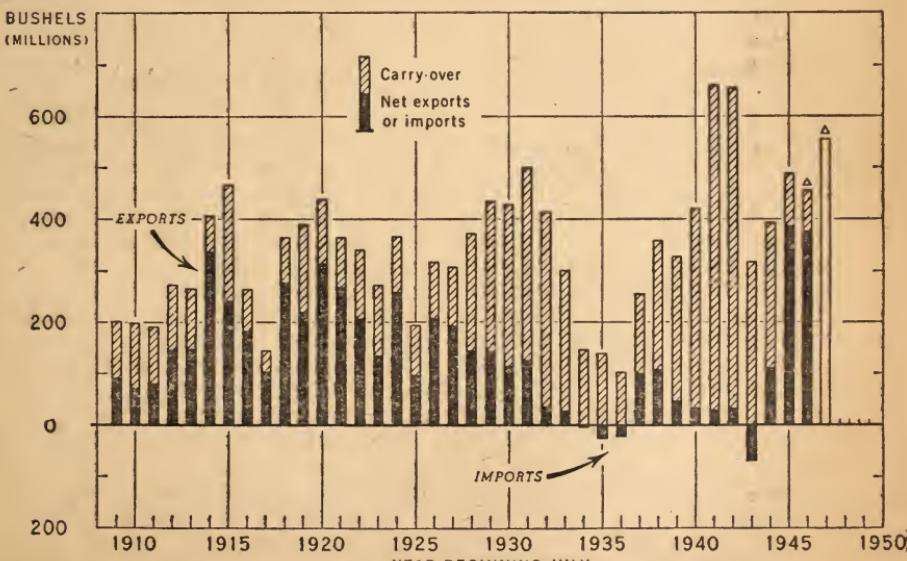
Up to next July 1, uses of wheat for food in this country will stay about the same as in the past year. However, considerably more wheat may be fed to livestock than last year, since the corn crop is likely to be short. Domestic disappearance for all purposes may reach 850 million bushels. A disappearance of this much wheat at home would leave about 670 million bushels for export up to July 1 next year and for carry-over.

Exports of wheat (including flour) may total about 450 million bushels. On this basis, the carry-over of old

wheat next July 1 would be not over 200 million bushels. In 1932-41, it averaged 235 million bushels. The actual volume of exports in the year ahead, of course, will depend largely upon the size of our corn and other grain crops, and the outturn of wheat crops in other countries.

Total wheat disappearance in 1946-47 was 1,173 million bushels. This total has been larger only in the two years 1943-44 and 1945-46. In the 1943-44 year 483 million bushels were used for feed, 107 million for industrial use, and only 66 million exported. In 1945-46, 300 million were used for feed, 21 million for industrial use, and 391 million exported. Exports in the 12 months up to last July 1 were about 396 million bushels, a new record. While feed use was about 200 million bushels, well above the prewar, 10-year average of 122 million bushels, it was the smallest since 1941. Wheat processed for food during the year is estimated at about 500 million bushels.

WHEAT SUPPLIES FOR EXPORT AND CARRY-OVER, CONTINENTAL UNITED STATES, 1909-47*



*CARRY-OVER PLUS PRODUCTION LESS DOMESTIC UTILIZATION
▲ PRELIMINARY

Although our wheat crop this year is the largest in history, prices are now above the \$1.92 per bushel received by growers in the last year. This average last year was the highest since 1919.

The price of new-crop wheat declined seasonally from late May at Kansas City, going to less than 10 cents above the loan rate by early July. Since then prices have risen with an increase in buying by mills and elevators and for export. Selling by growers has been slow and box cars have been scarce. Loans on the 1947-crop wheat, based on 90 percent of the June parity of \$2.03 per bushel, were announced on June 27. The national rate on a farm loan basis averages \$1.83, which is interpreted for No. 1 Hard Winter at Kansas City and Omaha at \$2.03 per bushel, for No. 1 Heavy Dark North Spring at Minneapolis at \$2.05, and No. 1 Soft White or Western at Portland, \$1.98. In addition to the loan program, the Department announced that purchase agreements will be offered growers through December 31, 1947, for wheat to be delivered to CCC in the 60 days immediately after the maturity date of 1947-wheat loans. Purchase prices will be the same as the corresponding loan delivery rates.

Wheat prospects in the Northern Hemisphere are for a harvest slightly above average. Prospects are best in North America and poorest in Europe. Prospects in Canada are good. The European crop, excluding Soviet Russia, will again be under the prewar average, and may be as much as 10 percent or more below the 1946 harvest. Prospects in western Europe are poor after a bad winter, but in central Europe the crop may be up to 1946. Wheat production in Soviet Russia may be larger than in 1946, although much smaller than prewar. Total production in Asia and Africa probably will be near the 1946 level.

While prospects for large exportable supplies are favorable in the United States and Canada, foreign needs probably will be still larger. World exports in 1946-47 totaled about 750 million bushels, but fell considerably short of meeting needs. Of this total over half came from the United States.

ROBERT E. POST

Bureau of Agricultural Economics

Corn Crop Estimate

THE 1947 corn crop was estimated at 2,770,930,000 bushels as of July 15, in a special mid-month report of the Crop Reporting Board of the Bureau of Agricultural Economics. This is 158 million bushels more than the prospective production since July 1. The 1947 crop was indicated to be 5 percent above average, compared with a shade under average on July 1. The crop still is late but has caught up somewhat.

The Corn Belt in the first two weeks of July had good corn weather—plenty of moisture, warm days and fairly warm nights. Fields were reported fairly free of weeds. Most Corn Belt farmers have planted more early season hybrids than usual to make up for their late start. Farmers in the eastern part of the Corn Belt have used more fertilizer.

The July 15 estimate provided totals for only the 12 important corn States. These usually turn out about 75 percent of the corn crop. No new estimates of corn production were made for other States. However, their earlier prospects seem to have been maintained. The July 1 estimates for these States were combined with the July 15 estimates for the 12 major corn States to get the total production estimate as of July 15.

Meat Production

ABOUT as much meat will be produced this fall and winter as a year earlier. A few more hogs probably will be slaughtered than a year ago, but at lighter weights. Fewer cattle will be fed next winter and spring than last. As a result, a larger than usual number of grass-fed cattle may be slaughtered this fall at the peak movement of cattle to feeding areas.

Meat output will start to fall off next spring. Most, if not all of the decrease will be in beef and veal.

Pork output next year will depend greatly on the size of this year's corn crop and on the prices for hogs and corn, especially this fall and winter, the breeding season for spring farrowing. This fall's pig crop, to be slaughtered mostly in the spring and summer of 1948, probably will be larger than the 30.6 million pigs saved in 1946.

\$800,000,000 for New Farm Machinery

FARMERS spent approximately \$800,000,000 last year for new farm machinery other than tractors, according to current estimates. This is about twice as much as their annual average expenditure for these machines in 1935-39. It is almost 12 times as much as farmers spent for this type of equipment in the bottom year of 1932.

Farmers' cash outlay for new machinery last year totaled a little over 5 percent of their net income. In 1935-39, they averaged paying out between 7 and 8 percent of their net income for new machinery.

If more equipment had been available during 1946, farmers probably would have bought more. Nevertheless, they now have enough equipment to do about twice as much work by machine as they could before the war. They also have nearly twice as many tractors. This indicates the increasing use of labor-saving machines such as combines, pick-up hay balers, and milking machines. Besides the addition of new machines, some tractors and other equipment are being used beyond the period when they would normally have been junked.

Measuring farm machinery prices against current wage rates and prices of farm products, farmers have invested their money well by buying new machinery when they could get it and use it profitably. Although farm machinery prices on June 15 of this year were 38 percent above the 1935-39 average, farm wage rates as a whole have risen 6 times that much. As a result, there is a marked advantage in the use of labor-saving machinery.

On the average, farmers are getting about two-and-one-half times the pre-war prices for farm products. Accordingly, only about half as much farm output is needed compared to prewar, to buy most kinds of machinery.

At July 15 prices, the proceeds from 171 pounds of butterfat would pay for a medium-sized cream separator. At 1935-39 prices, the average dairy farmer had to sell 315 pounds of butterfat to buy the same kind of separator.

About 97 bushels of oats now bring enough to pay for a 7-foot single disk

harrow, whereas before the war 200 bushels would barely do the same. Also, a farmer can sell around 182 bushels of corn for enough to pay for a two-bottom tractor plow. At prewar prices, he had to sell 175 bushels of corn to pay for the plow.

Many farmers are now in a position to pay cash for machinery. By paying cash, they avoid the risks of having to pay this year's debts out of next year's income. And they know that debt payments which seem reasonable at present incomes could be too heavy if incomes fell off sharply.

However, there is ample reason for continuing or even speeding the trend from muscle-power—human and animal—to machine power. High wage costs and high costs of feed for work stock tip the balance in favor of machinery wherever there is enough work to keep the machine in profitable operation. Running expenses for tractors have gone up far less than feed costs since 1939.

Since the beginning of the war, prices of farm machinery have risen only about one-half as much as the index of all prices paid by farmers, plus interest and taxes. This means that some other things farmers buy have increased relatively more in price than most farm machines. The other commodity groups in the "parity index" (prices paid by farmers including interest and taxes) are food, clothing, household operating expenses, furniture and furnishings, building materials, feed, equipment and supplies, seed, fertilizer, automobiles and tractors.

Farm machinery has a weight of about 11 percent in the index of prices paid by farmers for production goods and a weight of about 4 percent in the total index of prices paid by farmers for production and family living commodities plus interest and taxes.

ALBERT R. KENDALL
Bureau of Agricultural Economics

IN THE first half of 1947, farmers got around 11.7 billion dollars from marketings, about 30 percent above the same period last year.

Turkey Production in Oregon

WHEN families and friends sit down to the table for Thanksgiving dinner, all eyes turn toward the golden-brown turkey on the big platter. If the gathering happens to be in Oregon, chances are the turkey is a big "broad-breasted bronze," for Oregon growers specialize in this variety. Oregon raises about 2,500,000 turkeys a year besides shipping some 3,500,000 to 4,500,000 turkey eggs and poult to other States.

In 1946, Oregon ranked fifth among all States in turkey production and was the source of around 11 million turkey eggs. About 7½ million of these were sold by the producers of which an estimated 4.1 million were shipped out of the State. Turkeys sold in 1946 brought nearly 15 million dollars to Oregon growers, and there was an additional income from turkey eggs and poult that were shipped out.

The earliest pioneers in the Oregon country found no wild turkeys, but quail, wild ducks, and geese were plentiful. Early accounts say Fendel Sutherlin introduced the first turkeys into Oregon. He came to Oregon in 1847, liked the West, and wrote his folks in Indiana persuading them to move West in 1850 and bring with them a crate of turkeys on their covered wagon.

The first turkeys were brought to the Willamette Valley of western Oregon, but the center of the industry soon shifted to southern Oregon, near Roseburg. In the early days, most of the flocks had from 25 to 30 turkeys, and these were marketed before Thanksgiving and Christmas.

Until some 20 years ago the great majority of turkey eggs were hatched under hens. Turkey growers hatched these mainly for their own use, and the hens were used to raise poult.

Turkey production in Oregon made its first really large gains shortly after World War I, when abundant supplies of wheat caused a drop in the grain prices. By 1930 some flocks had been built up to from 1,000 to 4,000 birds, and in that year 6 carloads of turkeys were marketed from western Oregon.

In the last 15 years, turkey raising has become a large scale enterprise. In this more recent period, growers have

given careful attention to the problems of production and marketing. Much credit is due the poultry specialists of the Oregon State Agricultural College and of other agencies that have aided the turkey industry through a program of scientific research and education. Rapid expansion of production in Oregon and in other States has been made possible by the discovery of ways to control the dreaded "Back Head" and other diseases. The control and eradication of pullorum disease has received much attention in Oregon and a high percentage of the State breeding flocks are now included in the official program of the Oregon State Department of Agriculture as a part of the National Turkey Improvement Plan. Perhaps of equal importance has been the development of artificial incubation and brooding, modern methods of feeding and the establishment of up-to-date dressing and packing plants for killing, dressing, and packaging. Improved refrigeration, transportation, and financing also have helped make turkey production successful.

The trend in the Oregon turkey industry is towards fewer growers and larger flocks. The 1930 Federal census enumerated 10,016 farms in Oregon having turkeys with an average of 60 birds per farm. Ten years later, in 1940, only 4,534 farms had turkeys, but the average size of flock had increased to 370 birds per farm. The 1945 census recorded a further drop to 3,725 turkey farms, but with an average flock of 594 turkeys per farm. Many growers have from 5,000 to 15,000 turkeys.

Production of hatching eggs and poult has become a leading phase of the State's turkey industry during the last 10 years. The mild winters, early springs and moderate summers in Oregon make possible early hatching and a long hatching season. Oregon has gained a national reputation for its production of broad-breasted turkeys.

These turkeys, of large size and broad breast, have met with much favor from consumers. Recently the demand for lighter weight birds, particularly during the holiday season, has stimulated some interest in the lighter weight tur-

keys such as the Beltsville White.

In recent years, shipments of poult by air has been an interesting development. A number of Oregon hatcheries have been making regular air shipments, loading the poult on the planes the day they hatch so that they reach their destination in Western and Mid-Western States a few hours afterwards.

This spring some shipments of poult from the Willamette Valley hatcheries left Portland, Oreg., in the afternoon, arriving four hours later in Salt Lake City, 700 miles away. The elapsed time from hatchery to the turkey farm in Utah was only 48 hours. The initial cost for air shipment is higher than by rail, but the mortality is reported smaller.

Not many years ago it was often the case that one out of three turkeys in a flock died from the time the young poult were put in the brooder house until they were ready for market. By 1941, Oregon growers had reduced the average death loss to less than 22 percent. And in 1945 and 1946 the average loss dropped to only 16 percent.

Perhaps the cost of feed is the most variable item in the cost of producing turkeys. Feed often represents as much as 60 to 75 percent of the total cost in producing turkeys. Many growers in Oregon are able to raise turkeys under range conditions, thus reducing the amount of grain and other purchased feeds required.

Modern centrally located dressing plants have almost replaced the old practice of killing turkeys on farms. At some 28 points throughout the State, there are up-to-date dressing plants where the turkeys can be delivered from producing areas and processed for market.

Turkey production in Oregon has fallen sharply from the wartime peaks. Early season reports indicate that Oregon growers plan this year to raise 31 percent fewer turkeys than last year and 52 percent fewer than in 1945. Several factors have contributed to the recent down-trend. First of all is the high feed cost. In May of this year, Oregon growers paid \$4.13 per 100 pounds for a standard poultry feed ration; whereas, in May 1945, the cost was \$3.08 and in 1941 was only \$1.86 per hundred pounds. Growers estimate it

will cost a total of about \$6 per turkey for feed and all other expenses to put the 1947 birds on the market.

High freight rates have recently become a factor. These rates have been boosted by 20 percent this year. The rate increase has raised the cost of imported feeds and also stepped up the cost of shipments to Eastern markets. The price which growers receive for turkeys determines their profit margin, and in mid-January, 1947, growers were offered only 20 cents per pound live weight for toms. With Oregon turkeys weighing an average of 19 pounds each, this meant only \$3.80 per bird, which was much less than the cost of production. A Government support program was announced in February 1947 to support prices to growers on the rest of the 1946 crop at 90 percent of parity. A similar support program has been announced for the 1947 crop. In mid-May 1947, growers were getting an average of 27 cents per pound live weight for turkeys.

Modern dressing and refrigerating plants, with strict grading of turkeys for quality, have helped to give the consumer a high quality turkey the year round. Consumers with quick freezer units in their homes, or frozen food lockers, are finding it possible to have frozen turkey continually in storage and readily available for a family dinner.

A number of other methods of increasing demand are practiced. Some plants are cutting up turkeys and packaging smaller parts so that small families can have turkey any time of the year. A number of Oregon packers are now offering full drawn frozen "ready to cook" turkeys. One Oregon grower is marketing his turkeys as "smoked turkey" and featuring this item especially for holiday gifts. A special "turkey loaf" is being produced in Oregon for the delicatessen trade and luncheon meat counters. Various other prepared turkey products also have possibilities for expanding the market.

HERMAN A. SWEDLUND
Agricultural Statistician

SUPPLIES of canned evaporated and condensed milk held by wholesale grocers on June 30 were over one-fifth larger than a year earlier, the Bureau of Agricultural Economics reported.

U. S. Food Supply Plentiful

IN A world of hunger, America stands almost alone in having ample food for its people—as well as large supplies for export.

Total food supplies in this country are at a record high. Our food production this year is setting another record. Also, our imports of food are growing, notably in the case of sugar and oils. This year a somewhat smaller share of our available food supply is being exported and taken by the armed forces than last year. But the increase in the number of our civilians, as veterans have come home, is causing a slight cut from 1946 in over-all domestic food consumption per capita. Even so, it is expected to be about 17 percent above prewar. However, there is one fact here that must be stressed. This is that the increasing food prices of the past year have undoubtedly changed the kinds and amounts of food that are used by families of the various income groups compared with the war years. This year our farmers will grow about 40 percent more food for sale and farm home consumption than in 1935-39. That is the outlook now. The total probably will be over 20 percent above 1941 production.

Key factors here are the 1.4 billion bushel wheat crop and the 75 million bushel rice crop. Domestic sugar crops will also be larger. On the other hand, poor weather has cut down on our truck crops, potatoes, and sweetpotatoes. Small gains in sales and farm home consumption of meat and milk should about offset the small cut in output of poultry and eggs. Over-all output of livestock products will stay about as in 1946. The smaller corn crop probably will not slow down livestock production until next year. The corn supply outlook, however, may lead to early marketings this fall and winter.

With heavy export demand for food and a continued strong domestic demand, prices received by farmers averaged 270 percent of the 1909-14 base in the first 6 months of 1947, compared with 211 percent in the comparable period of 1946. The index of prices received reached a high of 280 in March and declined to 276 in July because of the declines in dairy, fruit, food

grains, and truck crop prices. These declines were largely due to seasonal increases in supplies. Farm prices are expected to remain high during the next few months.

About 8 percent of the Nation's available food supply in 1947 probably will be shipped out of the country. This total includes food for relief in occupied areas which makes up roughly one-fourth of the total.

Record high employment and income have kept domestic demand high. This factor, combined with strong export demand, has pushed retail food prices to new highs despite very large food supplies. The Bureau of Labor Statistics index of prices paid for food by moderate income families in large cities was 190 percent of the 1935-39 average in mid-June, compared with 145 percent a year earlier.

In brief, current information on 1947 consumption per capita of major foods indicates: Near record meat consumption this year, slightly higher than in 1946; less poultry and eggs consumed than last year; fluid milk and cream consumption down from the record highs of the past 2 years, but consumption of most manufactured dairy products at or above the 1946 rates; about a 2-pound increase in fats and oils over the low of the past 2 years, with the increase coming mostly in lard and butter; little change in the consumption of fresh and processed fruits; fresh and canned vegetable consumption down somewhat from the 1946 record rates; potato consumption about the same as last year because of reduced exports, feed, other nonfood use, and waste; little change in the per capita average for dry beans and peas from 1946, but with dry pea consumption continuing far above prewar; consumption of wheat as food apparently below 1946, probably due to large supplies of other foods and higher prices for bread and bakery products; more rice consumed per person than in the 3 previous years; consumption of corn products still high; much more sugar this year than in 1945 or 1946, but still somewhat less than the prewar average.

MARGUERITE C. BURK
Bureau of Agricultural Economics

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39 = 100) ¹	Income of industrial workers (1935-39 = 100) ²	1910-14=100			Index of prices received by farmers (August 1909-July 1914=100)			
			Whole-sale prices of all commodities ³	Prices paid by farmers		Livestock and products			
				Com-modities	Com-modities, interest, and taxes	Farm wage rates ⁴	Dairy products	Poul-try and eggs	Meat animals
1910-14 average	58	50	100	100	100	100	101	101	101
1915-19 average	72	90	158	151	150	148	154	163	158
1920-24 average	75	122	160	161	173	178	159	163	142
1925-29 average	98	129	143	155	168	179	160	155	148
1930-34 average	74	78	107	122	135	115	105	94	93
1935-39 average	100	100	118	125	128	118	119	109	119
1940-44 average	192	234	139	150	148	212	162	146	171
1945 average	203	290	154	180	174	350	197	196	210
1946 average	170	270	177	203	194	378	242	198	256
1946									
July	172	273	182	208	199	378	245	196	268
August	177	290	188	214	204		257	199	294
September	180	292	181	210	200		271	221	249
October	181	293	196	218	207	378	300	257	318
November	182	298	204	224	212		307	230	313
December	182	305	206	225	213		312	226	311
1947									
January	188	308	207	227	215	399	292	201	306
February	190	309	211	234	221		270	192	319
March	189	313	218	240	227		269	199	345
April	186	310	216	243	230	397	277	204	331
May	185	314	214	242	229		241	203	327
June	183	-----	216	244	231		233	205	328
July				244	231	404	244	220	343

Year and month	Index of prices received by farmers (August 1909-July 1914=100)								All crops and live-stock	Parity ratio ⁶		
	Crops											
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil-bearing crops	Fruit	Truck crops	All crops				
1910-14 average	100	101	102	96	98	99			99	100		
1915-19 average	193	164	187	168	187	125			168	162		
1920-24 average	147	126	192	189	149	148	143		160	151		
1925-29 average	140	119	172	145	129	141	140		143	149		
1930-34 average	70	76	119	74	72	94	106		86	90		
1935-39 average	94	95	175	83	106	83	102		97	107		
1940-44 average	123	119	245	131	159	133	172		143	154		
1945 average	172	161	366	171	215	220	224		201	202		
1946 average	201	195	382	228	244	226	204		226	233		
1946												
July	215	244	369	249	242	249	163		240	244		
August	203	225	388	271	242	203	162		233	249		
September	207	221	396	285	236	210	154		236	243		
October	218	222	410	304	255	208	151		244	273		
November	220	187	399	236	342	186	207		230	263		
December	224	186	406	242	334	211	166		232	264		
1947												
January	223	184	399	240	336	196	238		236	260		
February	235	185	390	246	334	203	275		245	262		
March	283	212	390	257	360	215	299		266	280		
April	277	223	387	260	353	223	295		269	276		
May	276	218	390	270	326	222	286		268	272		
June	253	240	390	275	318	228	215		262	271		
July	251	253	390	289	314	215	189		263	276		

¹ Federal Reserve Board; represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

² Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on pay rolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation. Revised April 1947. ³ Bureau of Labor Statistics.

⁴ Monthly data adjusted for seasonal variation.

⁵ Revised.

⁶ Ratio of prices received to prices paid for commodities, interest, and taxes.

⁷ 1924 only.

Prices

Prices received by farmers in mid-July were 276 percent of the 1909-14 average, 2 percent higher than in June. Higher prices for livestock and livestock products, corn, rice, potatoes, and dry edible beans more than offset lower prices for wheat, fruits and truck crops.

Prices paid by farmers, including interest and taxes, in mid-July remained at the revised June peak of 231. Higher prices for feeds and foods offset minor declines in prices for building materials and household supplies.

The general level of prices paid by farmers for products they buy is expected to remain high during the next few months.

The parity ratio—the index of prices received divided by the index of prices paid including interest and taxes—was 119 in July, compared with 117 in June.

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